Remarks

In the Office Action, claims 2-4 and 15 are allowed. Claims 1, 9, 12, and 16-26 were rejected. In this response, claims 1, 9, and 12 have been amended. No claims have been added or canceled. The subject matter for the amendments may be found throughout the originally filed specification, claims, and figures. Therefore, claims 1-4, 9, 12, and 15-26 are currently pending and in condition for allowance. No new matter has been introduced.

Allowed Claims

The Applicant thanks the Examiner for the indication of allowability for claims 2-4 and 15.

Claim Objections

Claim 12 was objected to because it included a minor typographical error. In response, the Applicant has amended the claim to correct the error. The Applicant respectfully requests the Examiner withdraw the objection.

Claim Rejections – 35 U.S.C. § 102

Claims 1, 9, and 19-21

These claims were rejected under § 102(b) as being anticipated by Link et al. (USP 5,526,164) ("Link"). The Applicant respectfully requests reconsideration of the rejection in light of the following remarks.

Claim 1 currently recites:

> A method for controlling a light emitting device, comprising:
> modulating an input of a light emitting device with both a test signal and a data signal to produce a modulated optical output signal, wherein the test signal is a noise-level test signal;
> acquiring the modulated optical output signal from the light emitting device;
> extracting the test signal from the acquired modulated optical output signal by applying a copy of the test signal to the acquired modulated optical output signal;
> digitally processing the extracted test signal to calculate one or more power control adjustments; and

controlling output power of the light emitting device by applying the calculated power control adjustments to the light emitting device.

Among other things, Link fails to teach "modulating an input of a light emitting device with both a test signal and a data signal to produce a modulated optical output signal, wherein the test signal is a noise-level test signal" and "extracting the test signal from the acquired modulated optical output signal by applying a copy of the test signal to the acquired modulated optical output signal."

Link teaches an optical transmitter that utilizes a pilot signal superimposed on an output signal of the laser diode. The pilot signal is lower in frequency and smaller in amplitude than the modulation current. As stated previously, this enables a photodiode to track the pilot signal when it would otherwise be unable to track the modulation current. Because the pilot signal is taught as being "one-hundredth of the amplitude of the modulation current," the Examiner states that the pilot signal is "noise" relative to the data signal. The Applicant respectfully disagrees and points out that there is no mention within Link of the pilot signal being a noise-level signal, as recited in the claim. Furthermore, Link teaches that the pilot signal contributes to the transmission of a logic 1, represented by a pulse height of P*max*, which is determined by the modulation current and the pilot current. *Link*, c.5 ll.45-51. Those of ordinary skill in the art readily understand that a noise-level signal would not be utilized as a component in the transmission of a logic 1, as expressly taught by Link. If the Examiner is taking official notice that the pilot signal is a noise-level signal, the Applicant respectfully request the Examiner provide an affidavit or declaration setting forth specific factual statements and an explanation to support the finding. *See* MPEP § 2144.03(C). For at least this reason claim 1 is allowable over Link

Additionally, Link fails to teach "extracting the test signal from the acquired modulated optical output signal by applying a copy of the test signal to the acquired modulated optical output signal." Link merely utilizes the photodiode and various other filters to retrieve the test signal because the pilot signal of Link is specifically designed for this purpose,

> [s]ince the photodiode 3 has a low-pass filtering effect and its limit frequency is smaller than the frequency *fD* of the data signal, nothing can be learned with respect to P*o* and P*max* on the basis of the photocurrent I*photo*. Therefore, a pilot signal is superimposed on the output signal of the laser diode.

Link, c.7 ll.62-67. Consequently, not only is there no teaching of extracting the test signal as recited in the claim, there is also no suggestion of such a recitation. For at least this additional reason, claim 1 is allowable.

Independent claim 9 includes generally similar recitations. Therefore, claim 9 is allowable for at least the same reasons that claim 1 is allowable. Claims 19-21 depend either directly or indirectly from independent claims 1 and 9, thereby incorporating their recitations. Therefore, for at least the same reasons that claims 1 and 9 are allowable claims 19-21 are similarly allowable.

Claim Rejections – 35 U.S.C. § 103

Claim 12

These claims were rejected under 35 U.S.C. § 103(a) over Levin et al. (USP 4,994,675) ("Levin") in view of Walker (USP 5,889,802) ("Walker"). The Applicant respectfully disagrees for the following reasons.

Claim 12 has been amended to include generally similar recitations to those of claims 1 and 9. Both Levin and Walker fail to teach or suggest at least the recitation of "recovering, by the laser transceiver, the test signal by applying a copy of the test signal to the transmitted signal."

Levin is directed to an apparatus for checking continuity of fiber optic links from a source to a receiver. Levin only teaches the transmission of a test signal ("XX test signal") "at a power level which is lower than that required for transmitting information." The power level for the test signal is lowered as a precautionary step to prevent careless or uninformed personnel from suffering eye damage from the light-wave output where the fiber optic link is open. The low power test signal, however, is still recovered without any teaching of applying a copy of the test signal, as recited in the claim.

Walker is also deficient in this respect. The Examiner relies on Walker merely for its teachings related to lock-in detection. Walker uses a lock-in detector to lock onto various harmonics when they reach a maximum. It remains entirely silent on the recovery of a test signal as recited in the claim. Therefore, when Levin is viewed either alone or in combination

with Walker, the prior art still fails to teach or suggest at least one recitation of claim 12. Consequently, the Applicant submits that claim 12 is allowable over the prior art of record.

Claims 16, 23, and 24

These claims were rejected under 35 U.S.C. § 103(a) as being unpatentable over Link in view of Walker. These claims depend from either claim 1 or 9, thereby incorporating their recitations. As stated previously, both Walker and Link fail to teach or suggest at least one of the recitations of the base claims. Consequently, even when the prior art is viewed in combination, they still fail to render the claims obvious. For at least this reason, claims 16, 23, and 24 are allowable.

Claims 17 and 25

These claims were rejected under 35 U.S.C. § 103(a) as being unpatentable over Link in view of Wax (US 4,164,036) ("Wax"). The Applicant note that these claims depend either directly or indirectly from either independent claim 1 or 9, thereby incorporating their recitations. Furthermore, the Applicant assert that Wax fails to cure the deficiencies of Link as discussed previously. Consequently, even when viewed in combination with Link, the claims remain allowable over the prior art of record.

Claim 18

This claim was rejected under 35 U.S.C. § 103(a) as being unpatentable over Link view of Walker and Matsuo et al (US 4,168,398) ("Matsuo"). Claim 18 depends from independent claim 1, thereby incorporating its recitations. The Applicant respectfully note that both Walker and Matsuo fail to cure the deficiencies of Link, as discussed previously. Therefore, claim 18 remains allowable over Link, Walker, and Matsuo when they are viewed independently or in combination.

Claim 22

This claim was rejected under 35 U.S.C. § 103(a) as being unpatentable over Link view of Habel et al (US 5,579,328) ("Habel"). Claim 22 depends from independent claim 9, thereby incorporating its recitations. The Applicant respectfully note that Habel fails to cure the deficiencies of Link as discussed previously. Therefore, claim 22 remains allowable over Link and Habel when they are viewed independently or in combination.

Claim 26

This claim was rejected under 35 U.S.C. § 103(a) as being unpatentable over Link view of Matsuo. Claim 26 depends from independent claim 9, thereby incorporating its recitations. The Applicant respectfully note that Matsuo, as stated earlier, fails to cure the deficiencies of Link. Therefore, claim 26 remains allowable over Link and Matsuo when they are viewed independently or in combination.

Conclusion

Applicant submits all the claims in the present application, specifically claims 1-4, 9, 12, and 15-26 are in condition for allowance. A Notice of Allowance is respectfully requested.

If there are any questions, the Examiner is invited to contact the undersigned at (503) 796-2408. Also, the Commissioner is hereby authorized to charge shortages or credit overpayments to Deposit Account No. 500393.

Respectfully submitted,

SCHWABE, WILLIAMSON & WYATT, P.C.

Dated: 8/21/09

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